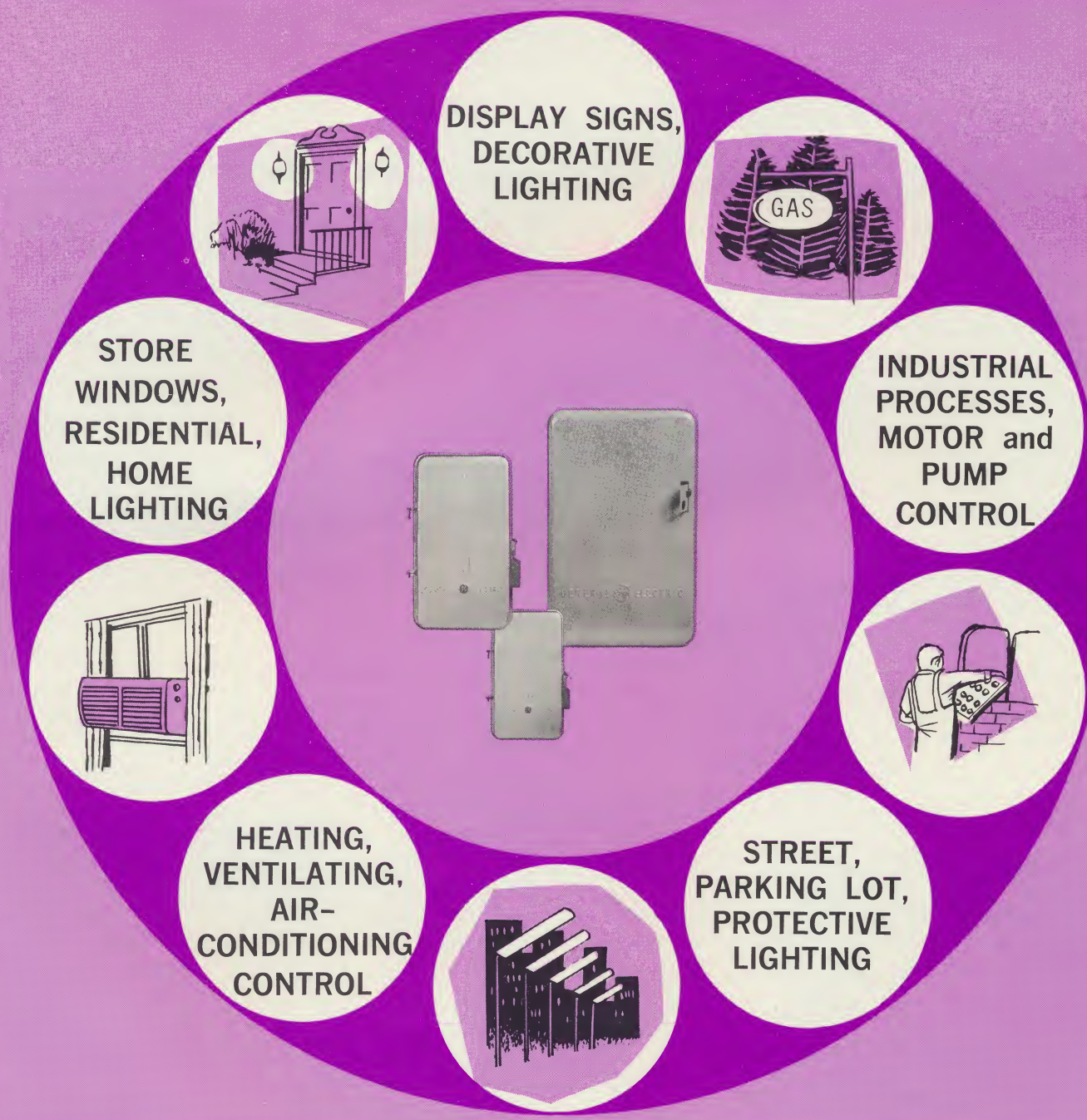


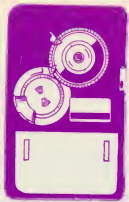


# GENERAL ELECTRIC **Time Switches**



GENERAL  ELECTRIC





## Time to Switch to General Electric's NEW TSA FAMILY

Top-Quality Time Switches at Ordinary Time-Switch Prices



**YOU CAN CHOOSE FROM THESE THREE MODELS:** TSA-40 for rugged heavy-duty applications either indoor or outdoor (left); TSA-47 for regular-duty indoor use (center); TSA-41 for regular-duty outdoor jobs (right).

**GET MORE FOR YOUR MONEY** — You get high-quality General Electric time switches at the same price as ordinary switches. What's more, you save money thanks to faster, simpler installation plus reduced servicing and maintenance costs.

**GET PERFORMANCE PROTECTION** — General Electric time switches put the accent on depend-

ability. Outside, an armour-tough protective case for lasting service. Inside, a host of years-ahead performance features that deliver the reliable control you need to get your timing job done right.

**GET THE RIGHT SWITCH** — Whatever your application, you'll find the right General Electric time switch to handle it. A complete line ready to tackle both indoor and outdoor jobs . . . regular- or heavy-duty.

**GET IT FAST** — Your nearby G-E sales office or authorized stocking distributor can arrange for immediate delivery on most General Electric time switches.



# The Finest in On-Off Controls

Every General Electric TSA time switch is packed with top-quality features to help get your timing jobs done right.

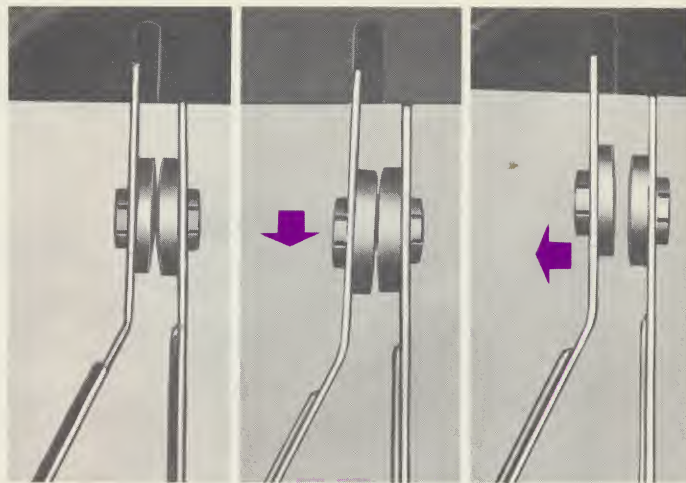
All G-E time switches are 40 amp tungsten rated. This permits higher lighting loads and, in many cases, without expensive contactors.

You can add the exclusively designed omit-device kit to all G-E time switches quickly and easily right in the field. Omitting devices on other time switches have to be factory-installed.

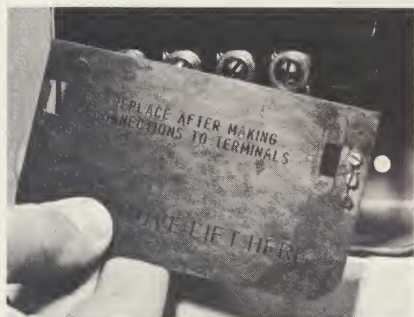
In addition, you can get the astronomic dial for sunset and sunrise schedules, standard 24-hour dial plus other optional dials to suit your particular timing needs.

You get fast shipment too. TSA time switches are available directly from General Electric's authorized distributors throughout the country.

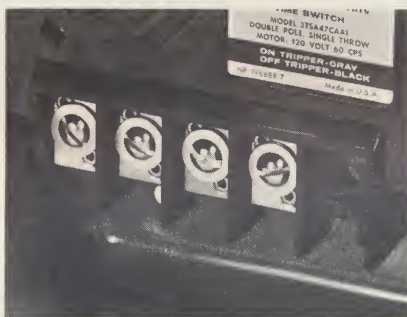
Quality features plus fast deliveries are mighty good reasons for letting General Electric's TSA family tackle all your timing jobs.



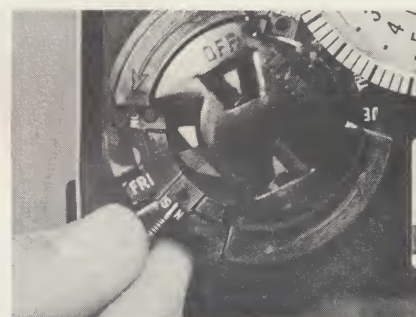
**UNIQUE SHEARING ACTION** on all General Electric time switches provides more reliable operation even under heavy loads, and gives you longer contact life. Illustrated left to right: (1) contacts closed, (2) shearing movement just before opening, (3) contacts open.



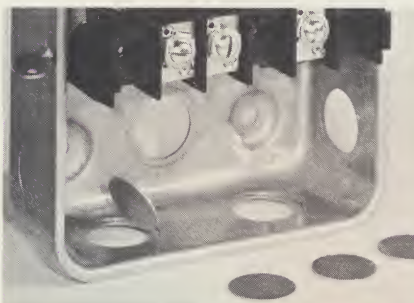
**"DEAD-FRONT" CONSTRUCTION** snaps in and out to speed the wiring operation. Provides a protective covering over the entire wiring cavity . . . helps increase safety by greatly reducing the possibility of accidents.



**EASILY ACCESSIBLE TERMINAL BOARD** with extra large space helps make time switch installation faster. Improved construction eliminates "hot spot" hazards.



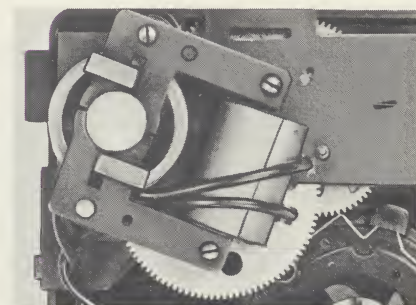
**EXCLUSIVE OMIT DEVICE** can be quickly and easily added to all switches right in the field. Allows skipping of one or more days per week (24 hour or astronomic dial only). Wheel has sections for each day of the week, in which small thumb screws are inserted for skipping day(s).



**PLENTY OF KNOCKOUTS** are conveniently located for easier installation. All TSA time switch cases can be side, top or bottom wired depending upon your particular application needs.

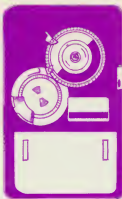


**REMOVABLE FRONT COVER** lifts off easily, gives you excellent accessibility when wiring or making time settings on switches, permits mounting in corners or close to other equipment. Latch assembly may be padlocked if desired.



**DEPENDABLE TELECHRON® MOTOR** delivers electric-clock accuracy without adjustment, regardless of any increased load or reduced voltage.





## New Astronomic Dial... Latest Addition to General Electric's Time-Switch Family



### Astronomic-Dial Time Switch

... ON at sunset, OFF at 10 PM to 2 AM or sunrise  
Many lighting applications depend upon accurate sunset and sunrise switching which varies with the seasons. General Electric's astronomic-dial time switch follows these changes automatically ... saves you time, money and inconvenience. No manual switching ... no human error ... no wasted electricity. Just set it once and forget it.

The astronomic-dial time switch is UL listed 40-amp tungsten-rated, right in line with today's high-current lighting systems. Ideal for advertising display signs, store window lighting, residential, protective or parking lot lighting jobs.

This unique time switch also brings you the many quality features found in all G-E time switches. What's more you get immediate delivery at popular prices.

### Astronomic Dial

General Electric's astronomic dial offers you an exclusive feature. The dial unit itself can be purchased separately AND easily interchanged in the field with standard dials found on any TSA-41 or -47 time switch. That's not all ... look at these other benefits:

- **Universal cam** — easily reset for any location in the U.S.
- **Accurate** — automatically changes settings each day to follow the seasons
- **Economical** — no manual switching, saves maintenance time and electricity
- **Immediate delivery** — fast off-the-shelf delivery from your nearest G-E authorized distributor
- **Low cost** — only General Electric offers the interchangeable astronomic dial, and at such a low price too
- **UL listed 40-amp tungsten-rated contacts** — for today's high-current lighting systems

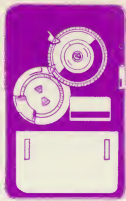
### Change Dials Yourself in 30 Seconds

All you need is a screwdriver to easily interchange an astronomic dial with a standard 24-hour dial on any TSA-41 or -47 time switch.

1. take out center screw
2. lift off standard dial
3. slip on astronomic dial, tighten center screw, that's all!







# Time to Switch to General Electric's TSA-47



For Regular-Duty Indoor Applications, Choose The Low-Cost TSA-47



**Accessories:** flush-mounted case with or without lock; surface-mounted duplex case without lock; omitting device kit; extra trippers ON, OFF, OFF with omit

**Optional features:** factory-set trippers; omitting screws (factory assembled into star wheel); motor voltage 24 volts or 277 volts, 60 cps; extra trippers

## Specifications:

Switch action — minimum ON — one hour, minimum OFF — one hour

Voltage — 120 and 240 volts A-C

Frequency — 60, 50 and 25 cycles

Contact arrangements:

single-pole — single-throw\*

single-pole — double-throw

double-pole — single-throw\*

\*UL listed

Motor — Telechron 4-watt

Size — 7<sup>1</sup>/<sub>4</sub> x 5 x 3<sup>1</sup>/<sub>2</sub> inches

Weight — 3 <sup>1</sup>/<sub>4</sub> lbs. net; shipping 4 lbs.

Your best choice for a variety of timing jobs such as advertising signs . . . store windows . . . floodlighting . . . poultry houses . . . heating . . . air conditioning . . . refrigeration . . . motor starting.

## TSA-47 Features

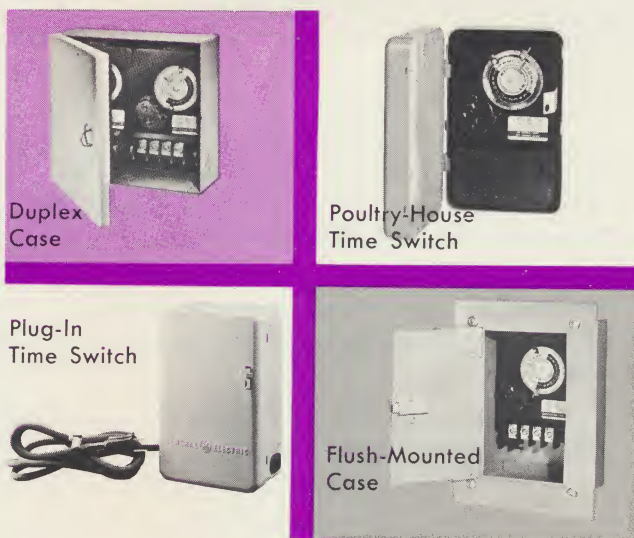
- Famous General Electric high quality at popular prices
- UL listed
- Heavy-duty 40-amp tungsten rated to meet today's high current lighting requirements
- Entire mechanism snaps in and out of its case in seconds, makes case mounting easier
- Wide temperature span: -20F to +150F (-29C to +66C)
- Omitting device permits you to skip one or more days per week
- Dial — 24-hour or astronomic (complete astronomic-dial switch or separate dial assembly)

## Ratings Type TSA-47

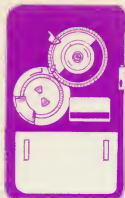
Contact rating per pole: 40 amperes tungsten load 240 volts, A-C for 120 and 240 volt models

Motor Volts	Switch		Plain Dial	Plain Dial with Omitting Device	Astronomic Dial*	Astronomic Dial* with Omitting Device
	Poles	Throw	60-cycle Cat. No.	60-cycle Cat. No.	60-cycle Cat. No.	60-cycle Cat. No.
120	1	1	699X1	699X7	699X1A	699X7A
240	1	1	699X2	699X8	699X2A	699X8A
120	2	1	699X3	699X9	699X3A	699X9A
240	2	1	699X4	699X10	699X4A	699X10A
120	1	2	699X5	699X11	699X5A	699X11A
240	1	2	699X6	699X12	699X6A	699X12A
WITH CASE, CORD, AND PLUG (10 amperes)						
120	1	1	699X25	699X26		

POULTRY HOUSE Model with two circuits and separate "OFF" for twilight period — 120 volts, Cat. No. 43G1; 240 volts, Cat. No. 43G2.  
\*when ordering, indicate city and state in which astronomic dial is to be used.





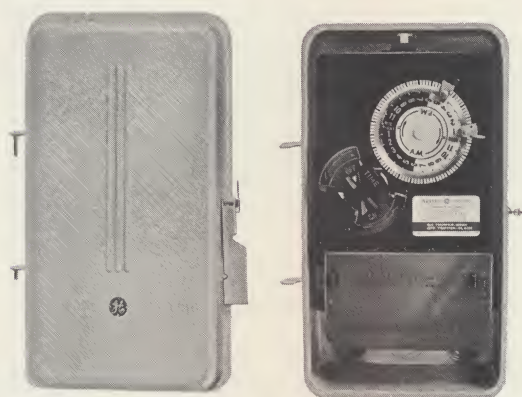


# Time to Switch to General Electric's TSA-41



For Regular-Duty Outdoor Applications, Choose the Rain-tight TSA-41

The ideal time switch for such jobs as street lighting . . . sign, store, floodlighting . . . irrigation and pump control . . . motor control . . . plus many other outdoor applications



## TSA-41 Features

- Industry's only regular-duty switch with UL listed rain-tight case
- All-weather protection
- UL listed
- Heavy-duty 40-amp tungsten-rated contacts
- Wide temperature range: -20F to +150F (-29C to +66C)
- Omitting device lets you skip one or more days per week
- Dial — 24-hour or astronomic (complete astronomic dial switch or separate dial assembly)

**Accessories:** omitting device kit

**Optional features:** windowed case; non-removable cover; 48-hour dial; factory-set trippers; omitting screws — factory assembled into star wheel; motor voltage — 24 volts or 277 volts, 60 cps; extra trippers; separate motor terminals (SPST only); separate motor leads (SPDT, DPST)

### Specifications:

Switch action — minimum ON — one hour, minimum OFF — one hour

Voltage — 120 and 240 volts A-C

### Contact arrangements:

single-pole — single throw\*

single-pole — double throw

double-pole — single throw\*

\*UL listed

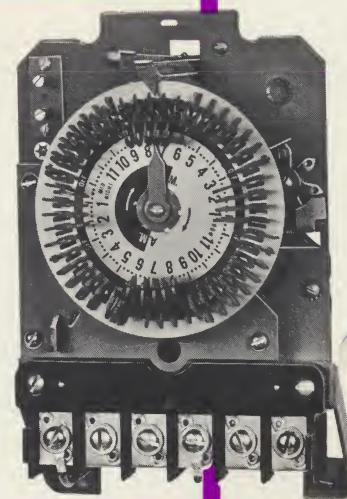
Frequency — 60, 50 and 25 cycles

Motor — Telechron 4-watt

Size — 9<sup>1</sup>/<sub>2</sub> x 6<sup>5</sup>/<sub>2</sub> x 4<sup>1</sup>/<sub>2</sub> inches

Weight — 3 <sup>3</sup>/<sub>4</sub> lbs. net; shipping 5 lbs.

**FOR SPECIAL APPLICATIONS** — the TSA-555 multi-tripper switch is designed for a greater number of ON-OFF operations which have to be changed frequently. To change your program, simply flip dial-mounted trippers ON or OFF. Close cousin of the TSA-40, the TSA-555 is furnished with 48 trippers for exceptional flexibility.

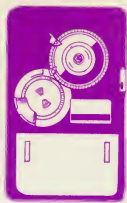


## Ratings Type TSA-41

Motor Volts	Switch		Plain Dial	Plain Dial with Omitting Device	Astronomic Dial*	Astronomic Dial* with Omitting Device
	Poles	Throw	60-cycle Cat. No.	60-cycle Cat. No.	60-cycle Cat. No.	60-cycle Cat. No.
120	1	1	698X85	698X91	698X85A	698X91A
240	1	1	698X86	698X92	698X86A	698X92A
120	2	1	698X87	698X93	698X87A	698X93A
240	2	1	698X88	698X94	698X88A	698X94A
120	1	2	698X89	698X95	698X89A	698X95A
240	1	2	698X90	698X96	698X90A	698X96A

\*when ordering, indicate city and state in which astronomic dial is to be used.





## Time to Switch to

## General Electric's TSA-40



For Heavy-Duty Indoor or Outdoor Applications, Choose the Rugged TSA-40

Ideal for street, sign, and floodlighting . . . capacitor switching of heating, air conditioning, refrigeration . . . pump and motor control . . . and many other indoor/outdoor jobs.

### TSA-40 Features

- "Workhorse" of General Electric's time-switch family
- Rugged, extra-reliable time control for heavy-duty operations
- UL listed rain-tight case
- UL listed 40-amp tungsten-rated contacts
- Omitting device permits you to skip one or more days
- Dial — 24-hour or astronomic (astronomic dial — ON at dusk, OFF at 10 PM to 2 AM or dawn, as the seasons vary)
- Minute dial for precision setting



**Accessories:** omitting device kit

**Optional features:** windowed case; non-removable cover; factory-set trippers; omitting screws  
dials — 60-minute, 120-minute, 12-hour, 48-hour and 7-day; motor voltages and frequency 208 volts, 277 volts; extra trippers  
separate motor terminals (SPST, SPDT)  
separate motor leads (DPST, DPDT)

#### Specifications:

Switch action — minimum ON — 15 minutes; minimum OFF — one-hour, 15 minutes

Voltage — 120, 240 and 480 volts

Frequency — 60, 50 and 25 cycles

Contact arrangements:

single-pole — single-throw\*  
single-pole — double-throw\*  
double-pole — single-throw\*  
double-pole — double-throw

\*UL listed

Motor — Telechron 4-watt greased motor

Size — 9<sup>1</sup>/<sub>32</sub> x 6<sup>5</sup>/<sub>32</sub> x 4<sup>1</sup>/<sub>32</sub> inches

Weight — 4 <sup>3</sup>/<sub>4</sub> lbs. net; shipping 5 <sup>3</sup>/<sub>4</sub> lbs.

### Ratings Type TSA-40

Motor Volts	Switch		Plain Dial	Plain Dial with Omitting Device	Astronomic Dial*	Astronomic Dial* with Omitting Device
	Poles	Throw	60-cycle Cat. No.	60-cycle Cat. No.	60-cycle Cat. No.	60-cycle Cat. No.
120	1	1	680X81	680X89	680X97	681X6
240	1	1	680X82	680X90	680X98	681X7
120	1	2	680X83	680X91	680X99	681X8
240	1	2	680X84	680X92	681X1	681X9
120	2	1	680X85	680X93	681X2	681X10
240	2	1	680X86	680X94	681X3	681X11
120	2	2	680X87	680X95	681X4	681X12
240	2	2	680X88	680X96	681X5	681X13

\*when ordering, indicate city and state in which astronomic dial is to be used.

**For Additional Technical Data . . .**

on General Electric time switches, write to General Electric Company, Schenectady 5, New York for Apparatus Handbook Section HBK-8191 (TSA-40), HBK-8192 (TSA-41), HBK-8193 (TSA-47), HBK-8194 (TSA-555).

**For Pricing Information . . .**

consult General Electric Apparatus Handbook Section HB-8190, or contact your nearest General Electric Sales Office or Distributor.

**In Canada**

Contact: Canadian General Electric Co., Ltd., 940 Lansdowne Ave., Toronto 4, Ontario.

**Outside U.S. and Canada**

Contact: International General Electric Co., 159 Madison Ave., N. Y. 16, New York.

